

Applicants : Tan et al.
USSN : 10/578,762
Filed : 12-19-2006
Examiner : Heidi M. Bashaw
Page : 14

Atty. Dkt. No. : 1189-PCT-US
Art Unit : 4138
Date of office action: 10-30-2007
Date of response: 1-30-2008

REMARKS

Claim Status

Claims 1-13 are pending in the application. Claims 11-13 have been canceled without prejudice to Applicants' right to pursue the subject matters in a future application. Claims 2, 3, 6 and 7 have been amended.

Amendments to the specification

Applicants note that the amendments filed with IPEA/AU on January 19, 2006 was not reflected in the present U.S. application. Hence, the present specification has been amended so as to match the amended specification filed with IPEA/AU on January 19, 2006. Copies of pages 5-7 of the amended specification filed with IPEA/AU on January 19, 2006 are attached herein for Examiner's reference (see **Exhibit A**). Accordingly, Applicants submit that no new matter has been added.

Drawings

The drawings are objected to for not showing every feature of the invention specified in the claims. Applicants submit that Figures 1-6 has been amended to show every feature of the invention specified in the claims. No new matter has been added.

Claim Objections

Claim 11 is objected as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicants submit that claim 11 has been canceled without prejudice.

Applicants : Tan et al.
USSN : 10/578,762
Filed : 12-19-2006
Examiner : Heidi M. Bashaw
Page : 15

Atty. Dkt. No. : 1189-PCT-US
Art Unit : 4138
Date of office action: 10-30-2007
Date of response: 1-30-2008

The Examiner also contends that the reference numbers enclosed in parentheses in the claims do not correspond to the reference numbers in the drawings. Applicants submit that the drawings have been amended so that the reference numbers enclosed in parentheses in the claims correspond to the reference numbers in the drawings.

Rejection Under 35 U.S.C. §112, 2nd Paragraph

Claims 2-3 and 7-8 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for reciting "and/or". Applicants submit that claims 2, 3 and 7 have been amended to delete the phrase "and/or".

Claims 12 and 13 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The rejection is moot because claims 12 and 13 have been canceled without prejudice.

Rejection Under 35 U.S.C. §102(b)

Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Meritt (U.S. Pat. No. 5,174,754). The rejection is respectfully traversed.

The salient feature of the present invention, *inter alia*, to be compared and distinguished from the above cited art is the first narrowing (5) which forms a neck portion between the base portion (8) and the arch wire receiving means, and that this neck portion is positioned substantially rear of the archwire receiving means. The rear positioning of the narrowing has enhanced the elasticity of the archwire receiving means in widening the opening (9) when

Applicants : Tan et al.
USSN : 10/578,762
Filed : 12-19-2006
Examiner : Heidi M. Bashaw
Page : 16

Atty. Dkt. No. : 1189-PCT-US
Art Unit : 4138
Date of office action: 10-30-2007
Date of response: 1-30-2008

receiving an archwire pushed through the second narrowing portion formed between the protrusions.

As a further point, the provision of the first narrowing at a location to the rear of the archwire slot has another important advantage stemming from the result of having a point of flexure further away from the slot or slot walls. The further the flexure point is located means that a smaller angle of deflection or flexure is required to open the slot's opening (9) wide enough for the archwire to clear the second narrowing formed by the protrusions (2). There is also less possibility of material fatigue and may even enable the use of non-elastic materials such as ceramics to make the brackets.

In other words, it provides for greater flexibility in the operation of the appliance, especially when inserting and/or removing the archwire from the appliance. A small angular deflection of the bracket in the region of the narrowing connection to the base of the bracket will result in a magnified increase in the opening and/or closing of the archwire slot. The flexibility of the bracket is restricted to the narrowing connection to the base of the bracket and not at the slot. The slot needs to be rigid and not easily deformed from forces, especially from occlusal forces. This is desirable as orthodontists would not like to use brackets that can be easily deformed. Meritt does not has the above unique features of the present invention.

In contrast, Meritt discloses a bracket having a pair of tieings (16), having a cantilevered notch (20) on each of the tieings (16) and a locking arm (22) placed at generally perpendicular

Applicants : Tan et al.
USSN : 10/578,762
Filed : 12-19-2006
Examiner : Heidi M. Bashaw
Page : 17

Atty. Dkt. No. : 1189-PCT-US
Art Unit : 4138
Date of office action: 10-30-2007
Date of response: 1-30-2008

angles to each of the tie wings at the end of the tie wings. In Meritt, the first narrowing is provided as "cantilever notch (20)" which are provided on both sides of the archwire slot (18) as shown in Figure 1-2, i.e. on about the same plane as the archwire. Hence, it is not true that Meritt's corresponding "cantilever notch (20)" is "provided substantially rear of the archwire receiving means" as the Examiner has characterized this prior art. In fact, both the embodiments disclosed in Meritt (Figs. 1- 2 and Fig. 3 - 4) show that the "cantilever notch (20)" is provided on or at about the same plane as the archwire slot. This notch position is about "mid-way from the base to the tip of the tie wings" [Meritt, col. 2 lines 7 - 8] and is "placed on each of the tie wings" [Meritt, col. 2 lines 5 - 6] and cannot therefore be interpreted as rear of the archwire slot.

When such narrowing is provided at the same level or plane, the effect is a weakening of the elasticity of the archwire receiving walls (28) on both sides resulting in the slot (18) being easily opened without the same elasticity of returning to its original position.

This is the result of the notches (20) defining a point of flexure immediately across the walls (28) as they are bent to open to admit an archwire into the slot (18). As such, the archwire is not as snugly fitted into the slot in Meritt and the weakened walls (28) might even be left or remained slightly opened with the archwire fitted into the slot (3). In addition, the presence of notches (20) on the tie wings affects the structured integrity of the walls of the archwire slot and the

Applicants : Tan et al.
USSN : 10/578,762
Filed : 12-19-2006
Examiner : Heidi M. Bashaw
Page : 18

Atty. Dkt. No. : 1189-PCT-US
Art Unit : 4138
Date of office action: 10-30-2007
Date of response: 1-30-2008

increases the possibility of breakages. Meritt further discloses that the archwire used is preferably a T-shaped type archwire.

In contrast, our first narrowing is provided substantially rear of the slot (3) thereby providing a point of flexure for the slot walls substantially rear of the slot (3), i.e. much further away from the slot walls. This increases the elasticity of flexure of the walls without weakening them, so that with the walls retaining their elasticity, the walls keep their original positions and shape to keep the archwire snug in the slot (3). Further, the present invention may with used with conventional orthodontics mechanics and does not require customized T-shaped type archwire.

Accordingly, it is respectfully submitted that the present feature of the "first narrowing (5) forming a neck portion with the base portion (8) may be distinguished from Meritt by its position at "substantially rear of" the archwire slot and as this distinguishing feature is already well defined in our present claim 1, we do not propose any further amendment in this regard.

Accordingly, dependent claims 2-10 should be interpreted in light of this distinguishing feature and when read with their respective limitations, are therefore distinguishable over Meritt as well. Similarly, method claim 11 should be interpreted in light of this distinguishing feature as discussed above.

In view of the above remarks, Applicants submit that Meritt does not anticipate claims 1-11 because Meritt does not teach each and every aspect of the present invention. Accordingly, Applicants

Applicants : Tan et al.
USSN : 10/578,762
Filed : 12-19-2006
Examiner : Heidi M. Bashaw
Page : 19

Atty. Dkt. No. : 1189-PCT-US
Art Unit : 4138
Date of office action: 10-30-2007
Date of response: 1-30-2008

respectfully request that the rejection of claims 1-11 under 35
U.S.C. 102(b) be withdrawn.

Applicants: Tan et al.
USSN : 10/578,762
Filed : 12-19-2006
Examiner : Heidi M. Bashaw
Page : 20

Atty. Dkt. No. : 1189-PCT-US
Art Unit : 4138
Date of office action: 10-30-2007
Date of response: 1-30-2008

CONCLUSION

Applicants respectfully maintain that all the grounds of rejections raised in the October 30, 2007 Office Action have been addressed and earnestly urge the Examiner to render favorable action for the claimed invention.

If a telephone interview would be of assistance in advancing the prosecution of the subject application, Applicants' undersigned attorney invites the Examiner to telephone him at the number provided below. If any additional fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 50-1891.

Respectfully submitted,

Albert Wai-Kit Chan

Albert Wai-Kit Chan
Registration No. 36,479
Attorney for Applicant(s)
Law Offices of
Albert Wai-Kit Chan, PLLC
World Plaza, Suite 604
141-07 20th Avenue
Whitestone, New York 11357
Tel: (718) 799-1000
Fax: (718) 357-8615
E-mail: chank@kitchanlaw.com